

We claim:

1. A monoclonal antibody to lipoteichoic acid of Gram positive bacteria, wherein the monoclonal antibody (a) binds to lipoteichoic acid at a level that is twice background or greater and (b) enhances the opsonization of Gram positive bacteria by 75% or more.
2. The monoclonal antibody of claim 1 wherein the antibody binds a peptide sequence selected from the group consisting of:

W R M Y F S H R H A H L R S P (SEQ ID NO 1) and
W H W R H R I P L Q L A A G R (SEQ ID NO 2).
3. The monoclonal antibody of claim 1 wherein the antibody is a chimeric non-human/human antibody.
4. The chimeric antibody of claim 3 comprising at least part of a human immunoglobulin constant region and at least part of a non-human immunoglobulin variable region having specificity to lipoteichoic acid of Gram positive bacteria.
5. A chimeric immunoglobulin chain comprising at least part of a human immunoglobulin constant region and at least part of a non-human

immunoglobulin variable region having specificity to lipoteichoic acid of Gram positive bacteria.

6. The chimeric immunoglobulin chain of claim 5 wherein the constant region is selected from the group consisting of IgG, IgA, and IgM.
7. The chimeric immunoglobulin chain of claim 5 wherein the chain is selected from the group consisting of a heavy chain and a light chain.
8. The chimeric immunoglobulin chain of claim 7 wherein the chain is a light chain is selected from the group consisting of a kappa chain and a lambda chain.
9. An antibody to lipoteichoic acid of Gram positive bacteria wherein the antibody
 - (a) binds to lipoteichoic acid at a level that is twice background or greater; (b) enhances the opsonization of Gram positive bacteria by 75% or more; and (c) binds to a peptide sequence selected from the group consisting of:

W R M Y F S H R H A H L R S P (SEQ ID NO 1) and
W H W R H R I P L Q L A A G R (SEQ ID NO 2).
10. A pharmaceutical composition comprising the antibody of one of claims 1 or 9, or fragments, regions, or derivatives thereof, and a pharmaceutically acceptable carrier.

11. A protective monoclonal antibody to lipoteichoic acid of Gram positive bacteria, wherein the antibody enhances survival in a lethal animal model by 10% or more.
12. The protective monoclonal antibody of claim 11, wherein the antibody binds to a peptide sequence selected from the group consisting of:

W R M Y F S H R H A H L R S P (SEQ ID NO: 1) and
W H W R H R I P L Q L A A G R (SEQ ID NO: 2).
13. A pharmaceutical composition comprising the antibody of claim 11, or fragments, regions, or derivatives thereof, and a pharmaceutically acceptable carrier.
14. A method for treating a patient having an infection caused by a Gram positive bacteria comprising administering to the patient a therapeutically effective amount of the pharmaceutical composition of claim 10 or 13.
15. A method for preventing infections caused by Gram positive infections in a patient comprising administering to the patient a prophylactically effective amount of the pharmaceutical composition of claim 10 or 13.

16. —An lipoteichoic acid epitope peptide mimic comprising a peptide sequence selected from the group consisting of:

- (a) W R M Y F S H R H A H L R S P (SEQ ID NO 1)
- (b) W H W R H R I P L Q L A A G R (SEQ ID NO 2), and
- (c) peptide sequences that are substantially homologous to the sequences of (a) or (b).

17. A peptide encoded by the DNA of the variable region of the anti-lipoteichoic antibody of Figure 12 or a sequence that is at least 70% homologous to that DNA.

18. The peptide of claim 17 wherein the variable region on a chain is selected from the group consisting of the heavy chain and light chain.

19. The peptide of claim 17 wherein the DNA of the variable region encodes one or more of the Complementarity Determining Regions.

20. The peptide of claim 19 wherein the variable region is on a chain selected from the group consisting of the heavy chain and light chain.

21. A peptide characterized by amino acids corresponding to one or more of the Complementarity Determining Regions of the variable region of the anti-

lipoteichoic antibody of Figure 12 or amino acids that are at least 70% homologous to the Complementarity Determining Regions.

22. The peptide of claim 21 wherein the variable region is selected from the group consisting of the heavy chain and the light chain.
23. A pharmaceutical composition comprising the peptides of any of claims 16-22 and a pharmaceutically acceptable carrier.
24. A method for treating a patient having an infection caused by a Gram positive bacteria comprising administering to the patient a therapeutically effective amount of the pharmaceutical composition of claim 23.
25. A method for preventing infections caused by Gram positive bacteria in a patient comprising administering to the patient a prophylactically effective amount of the pharmaceutical composition of claim 23.
26. A vaccine for preventing infections caused by Gram positive bacteria comprising a lipoteichoic acid antigen and a pharmaceutically acceptable carrier.
27. The vaccine of claim 26 wherein the lipoteichoic acid antigen comprises the epitope of the antigen or an epitope mimic.

28. The vaccine of claim 26 wherein the epitope is a peptide sequence selected from the group consisting of:

- (a) W R M Y F S H R H A H L R S P (SEQ ID NO 1)
- (b) W H W R H R I P L Q L A A G R (SEQ ID NO 2), and
- (c) peptide sequences that are substantially homologous to the sequences of (a) or (b).

29. An animal lethality test for determining the *in vivo* activity of a composition to treat or prevent infections by Gram positive bacteria comprising the steps of:

- a) administering a lipid emulsion to at least two groups of suckling rodents;
- b) injecting into one group the composition to be tested and injecting into the other group a control substance;
- c) administering through a catheter an amount of Gram positive bacteria sufficient to cause lethal sepsis;
- d) leaving the catheter under the skin of the rodent ; and
- d) assessing the affect of administration of the composition on either or both bacteremia and survival,

wherein compositions that either reduce bacteremia or enhance survival are useful to treat or prevent infections by Gram positive bacteria.

30. The method of claim 29 wherein the composition to be tested is an antibody to lipoteichoic acid of Gram positive bacteria or fragments thereof.

31. The method of claim 29 wherein the Gram positive bacteria is selected from the group consisting of *Staphylococcus epidermidis*, *Staphylococcus hemolyticus*, *Staphylococcus hominus*, *Staphylococcus aureus*, *Staphylococcus mutans*, *Staphylococcus faecalis*, and *Staphylococcus pyogenes*.